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March 7, 2005

**REMARKS/ARGUMENTS/INTERVIEW SUMMARY**

Applicants appreciate Examiner Coulter making the time for a 3/2/05 interview attended by Steve Poole, Jon Schuster, inventor Craig Crutcher (by telephone), and Rob Faris. During the interview, Steve Poole explained to Mr. Coulter that WRQ—which has been in the software business since 1981—provides software to the enterprise that allows end users to conveniently access legacy and other host computers via terminal emulation software. Steve emphasized that WRQ generally has goals of ease of use and simple distribution to many users as transparently as possible. Steve said that generally, WRQ tries to focus on getting applications up and running on the user's desktop with as little delay as possible. For example, Steve referred to “first contact time” as the delay after the user has clicked on a function and before that function is made available for the user's use. From an ease of use standpoint, “first contact time” should generally be as short as possible.

Steve also discussed issues relating to centralized management of applications (i.e., to simplify the software distribution tasks of an IT department). Steve and Jon also explained that some end user platform contexts involve different web browsers presenting somewhat incompatible requirements. They explained that many users have multiple web browsers on the same desktop each of which has its own cache. Information maintained in one web browser's cache is not necessarily available to another web browser. Also, the “virtual machine” execution environment provided by different web browsers may not be 100% identical. These considerations create

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significant technical issues when it becomes desirable to deploy functionality such as terminal emulation via web browser based technology.

Steve further explained that help desks and other user support aids often tell an end user having problems to flush or erase the browser's cache. When this occurs, resources previously stored in the browser cache are lost. If a user or other application needs such resources again, they will need to be downloaded once again--incurring a potentially significant penalty in terms of wait time.

Inventor Craig Crutcher explained that one technical challenge he faced in distributing and deploying browser-based functionality relates to how to manage and control the lifespan of the elements providing user functionality. Craig said that his exemplary illustrative non-limiting implementation disclosed in the subject patent application provides a downloaded applet which creates and manages a cache that is different from the browser cache. In the disclosed illustrative exemplary non-limiting implementation, caching of at least some elements is controlled by the applet as opposed to the browser. In one exemplary illustrative non-limiting example implementation, an initial applet responsible for creating the different cache is itself cached in the browser's cache, but subsequent resources used to provide additional functionality are cached in a different cache that the applet has created itself. Craig explained that this initial applet is used to cache, in that applet-created cache, additional downloaded resources providing additional functionality for terminal emulation or other features.

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Craig explained that in his illustrative exemplary disclosed implementation, the initial applet download can be fast because it can be relatively small—for example in his exemplary illustrative non-limiting implementation it may simply create a cache different from the browser cache and then provide functionality to request downloading of additional application-specific or other applets into that applet-created cache. In the exemplary illustrative non-limiting implementation, the lifespan of objects within the applet-created cache is independent of browser cache persistence, and those objects can be available for use by multiple different platforms on the same remote computing machine (e.g., Internet Explorer, Netscape, or other browsers).

To demonstrate these features, Steve operated a laptop computer that had both WRQ client-side and WRQ server-side software on it such that the client software communicated with server software on the same computing device.<sup>1</sup> Steve activated an example browser-based WRQ application (i.e., IBM 3270 emulation allowing a user to connect to and emulate an IBM 3270 terminal such as used to display information from an IBM mainframe computer). Steve showed Examiner Coulter that this resulted, in this particular exemplary illustrative non-limiting commercial implementation, in a relatively large number of files being downloaded from the server side to the client side for use by the client side. Steve showed that these files were stored in a cache on the client side that was different from the browser cache. Steve then started a different web browser (i.e.,

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<sup>1</sup> Steve explained that in the "real world" requiring download over a data network, there would be additional delays associated with downloading information from the server software to the client software.

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Safari instead of Internet Explorer) and showed that terminal emulation launched from that different browser platform quickly because it was able to make use of the cached data files. Steve explained that if the data files had been cached in Internet Explorer's cache, the Safari web browser would likely not be able to access them and so all of those same data files would need to be downloaded again even though they were already cached elsewhere.

Steve Poole provided a further demonstration wherein he activated a proxy server software on this same laptop that had the effect of "throttling" the connection speed between the server side software and the client side software to result in an effective communication rate (just as a user might experience when accessing server over a relatively slow e.g., 56 kilobaud modem dialup connection). Steve Poole erased the files from the cache and then activated terminal emulation once again—demonstrating that on a low-bandwidth connection, it could take a significant amount of time for these various data files to be downloaded onto the client side. This latter demonstration showed that it may be desirable to an end user's experience to avoid having to download significant amounts of the same information repeatedly each time the user activates the same browser-based functionality.

Steve Poole and Jon Schuster then discussed the Landsman reference that the Examiner has relied on to reject the claims. They explained that Landsman relies on downloaded ads being present and available in the cache of the browser the user is operating at the time so that browser can access them and display them as part of web

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pages. Steve and Jon explained that Landsman's "interstitial" advertising solution appears to have the goal of optimizing use of the browser's own cache between successive browser page displays. They explained that in contrast, WRQ's exemplary illustrative non-limiting approach goes outside of the cache of the browser the user is operating at the time and instead uses an applet to create a different cache. They explained that the Landsman reference does not teach or suggest using an applet to create and maintain a cache.

Examiner Coulter reviewed applicant's proposed amendment to claim 1 (for discussion purposes only) and observed that this amendment appears to distinguish over the Landsman reference. Applicants said they intended to amend each of independent claims 14, 28, and 29 along the same lines. Claims 5 and 18 have already been allowed, so there is no need to further amend those claims based upon the Examiner's indication of allowance and those claims may stand as they are.

Applicants also mentioned, during the interview, Apple QuickTime as an example of storing information outside of a browser cache (see also Marimba Castanet described at page 4 of applicant's specification). Applicants submitted that it did not appear that QuickTime uses an applet to manage the contents of a cache and control the persistence of downloaded resources as recited in proposed claim 1 as amended. Applicants are attaching a 1997 white paper entitled "QuickTime Concepts" apparently published by Apple Computer which describes some of QuickTime's features.

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The undersigned invited the Examiner to ask any additional questions he might have of any of the participants in the interview. The interview then concluded.

#### **INFORMATION DISCLOSURE STATEMENT**

Applicant attaches a form PTO-1449 listing additional items for the Examiner's consideration. These items were identified in the course of a separate proceeding not directly related to the subject application, but may possibly have some relevance to the issues before the Examiner. Accordingly, applicant requests the Examiner to consider these items in this case, and to initial, date and return the attached form PTO-1449. The Rule 97 fee associated with such a submission is attached.

All outstanding issues have been addressed, the applicant believes this entire case is now in condition for allowance. However, if any further issues arise or remain outstanding, the applicant requests Examiner Coulter to contact the undersigned at the telephone number listed below to resolve any such issues expeditiously without need of a further written office action.

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Respectfully submitted,

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